

REMARKS

Claims 1-20 are pending in this application. By this Amendment, Applicants amend claim 1 and cancels claims 11-20.

The drawings were objected to for failing to designate Figs. 13 and 14 as --Prior Art--. It is noted that fig. 15 also illustrates only that which is old. Accordingly, Applicants have amended Figs. 13-15 in the accompanying Request for Approval of Drawing Corrections to properly be designated as --Prior Art--. Accordingly, Applicant respectfully requests reconsideration and withdrawal of the objection to the drawings.

Claims 1-4 and 7-10 were rejected under 35 U.S.C. §102(b) as being anticipated by Katsuki et al. '779. Claims 1-4 and 6-10 were rejected under 35 U.S.C. §102(e) as being anticipated by Ikeda et al. '330. Claims 1-4, 7-8, and 10 were rejected under 35 U.S.C. §102(b) as being anticipated by Honkomp et al. '089. Claims 1-4 and 7-10 are rejected under 35 U.S.C. §102(b) as being anticipated by Takakura et al. (JP 05-299206). Applicant points out that the Examiner stated that NITORI discloses the claimed invention in the Takakura et al. (JP 05-299206) rejection. It is believed that Examiner inadvertently used Nitori because the description of the prior art matches with Takakura et al. (JP 05-299206) and does not match with Nitori (JP 05-299205). Claim 5 was rejected under 35 U.S.C. §103(a) as being obvious over Takakura et al. (JP 05-299206), Katsuki et al. '779, or Ikeda et al. '330 in view of Nagao et al. '972. Applicant respectfully traverse these rejections.

Claim 1 has been amended to recite:

“A surface-mountable PTC thermistor element comprising:  
a thermistor element body including a top surface and a bottom surface;  
electrodes disposed on the top surface and the bottom surface of the thermistor element body;  
**lower and upper terminals arranged such that each of the electrodes is connected with a respective one of the lower and upper terminals, and each of the lower and upper terminals is extended downward;**  
wherein said lower terminal includes a junction portion contacting said thermistor element body, a short vertical-leg portion

**bent vertically in a downward direction substantially perpendicular to the surface of said thermistor element body, and a lower-end portion which extends lengthwise in the radial direction;  
wherein said vertical-leg portion of the lower terminal is placed inside the thermistor element body in a radial direction from an outer edge of the thermistor element body.” (emphasis added)**

Applicants have amended claim 1 to more specifically recite that the vertical-leg portion of the lower terminal is substantially perpendicular to the surface of the thermistor element body and to recite that a lower-end portion that extends lengthwise in the radial direction. With this improved arrangement, Applicants' surface-mountable PTC thermistor element including the vertical-leg portion of the of the lower terminal is arranged to support all of the pressing force during surface mounting. (Specification page 6, lines 12-20).

Katsuki et al. '779 teaches a surface-mountable PTC thermistor element in **figs. 1, 3, and 7** including a lower terminal having a vertical leg portion **111a, 121a, and 421** inside the thermistor element body. However, Katsuki et al. '779 clearly fails to teach or suggest a vertical-leg portion bent vertically in a downward direction substantially perpendicular to the surface of said thermistor body as recited in the present claimed invention.

Ikeda et al. '330 teaches a surface-mountable PTC thermistor element in **fig. 7F** comprising a lower terminal with a vertical leg portion **172** inside the thermistor element body. However, Ikeda et al. '330 clearly fails to teach or suggest a lower-end portion which extends lengthwise in the radial direction as recited in the present claimed invention.

Honkomp et al. '089 teaches surface-mountable PTC thermistor elements in **figs. 2-6** comprising with terminals **17** and **39**. Honkomp et al. '089 does not teach or suggest in **figs. 2 and 3**, even when the elements are turned on their side, both the upper and lower terminals **17** extending downward from the thermistor element body **38**. Additionally, Honkomp et al. '089 clearly fails to teach or suggest in **figs. 4-6**, even when the elements are turned on their side, that the vertical-leg portion **39** attached to

the junction is inside the thermistor body **38**. Thus, Honkomp et al. clearly fails to teach or suggest "lower and upper terminals arranged such that each of the electrodes is connected with a respective one of the lower and upper terminals, and each of the lower and upper terminals is extended downward" and "wherein said vertical-leg portion of the lower terminal is placed inside the thermistor element body in a radial direction from an outer edge of the thermistor element body" as recited in claim 1 of the present application.

Takakura et al. (JP 05-299206) teaches a surface-mountable PTC thermistor element in **fig. 1** comprising a lower terminal **15** with a leg portion extending in a downward direction at any angle of approximately 45° inside the thermistor element body. However, Takakura et al. (JP 05-299206) clearly fails to teach or suggest "a vertical-leg portion bent vertically in a downward direction **substantially perpendicular** to the surface of said thermistor body" and "a lower-end portion which extends lengthwise in the radial direction" as recited in claim 1 of the present application.

Nagao et al. '972 was used by the Examiner to disclose the use of an electrode material for a PTC thermistor. However, Nagao et al. '972 clearly fails to teach or suggest a lower terminal includes "a junction portion contacting said thermistor element body, a short vertical-leg portion bent vertically in a downward direction substantially perpendicular to the surface of said thermistor element body, and a lower-end portion which extends lengthwise in the radial direction" as recited in claim 1 of the present application.

Accordingly, Applicants respectfully submit that Katsuki et al. '779, Ikeda et al. '330, Honkomp et al. '089, Takakura et al. (JP 05-299206), or Nagao et al. '972, applied alone or in combination, fail to teach or suggest the unique combination and arrangement of elements recited in claim 1 of the present application.

In view of the foregoing Amendments and Remarks, Applicants respectfully submit that claim 1 is allowable. Claims 2-10 depending on claim 1 are allowable for at least the reasons that claim 1 is allowable.

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In view of the foregoing amendments and remarks, Applicants respectfully submit that this application is in condition for allowance. Favorable consideration and prompt allowance are solicited.

To the extent necessary, Applicants petition the Commissioner for a One-month extension of time, extending to October 24, 2002, the period for response to the Office Action dated June 24, 2002.

The Commissioner is authorized to charge any shortage in fees due in connection with the filing of this paper, including extension of time fees, to Deposit Account No. 50-1353.

Respectfully submitted,

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**VERSION WITH MARKINGS SHOWING CHANGES MADE**

1. A surface-mountable PTC thermistor element comprising:  
a thermistor element body including a top surface and a bottom surface;  
electrodes disposed on the top surface and the bottom surface of the thermistor element body;  
lower and upper terminals arranged such that each of the electrodes is connected with a respective one of the lower and upper terminals, and each of the lower and upper terminals is extended downward;  
wherein said lower terminal includes a junction portion contacting said thermistor element body, a short vertical-leg portion bent vertically in a downward direction substantially perpendicular to the surface of said thermistor element body, and a lower-end portion which extends lengthwise in the radial direction;  
wherein [a] said vertical-leg portion of the lower terminal is placed inside the thermistor element body in a radial direction from an outer edge of the thermistor element body.